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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech II Year I Semester Supplementary Examinations August-2021

DATABASE MANAGEMENT SYSTEMS

(Common to CSE & CSIT)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a Define Database. Discuss about applications of Database Systems. 6M
b List out the purpose of Database Systems. 6M

OR

- 2 a Define i) Database ii) DBMS iii) List the database Applications 6M
b Enumerate the Data Abstraction and discuss levels of Abstraction in detail. 6M

UNIT-II

- 3 a Illustrate different operations in Relational algebra with an example. 7M
b Discuss about Complex integrity constraints in SQL. 5M

OR

- 4 a Distinguish between two set theoretic operations of relational algebra with an example. 6M
b Explain the WHERE, ANY, AS and ALL sub queries with examples. 6M

UNIT-III

- 5 a Differentiate BCNF with 3rd normal form. 6M
b Explain about demoralization. 6M

OR

- 6 Explain the following normal forms 4M
a Second Normal Form 4M
b Third Normal Form 4M
c Boyce-Codd Normal Form 4M

UNIT-IV

- 7 a How do you implement Atomicity and Durability? Explain. 6M
b What is a Transaction? Explain the properties of the transaction and the states of transactions with a neat sketch. 6M

OR

- 8 Explain Timestamp-Based Concurrency control protocol and the modifications implemented in it. 12M

UNIT-V

- 9 a Write a short note on Buffer management for management of data. 6M
b Explain in detail about ISAM. 6M

OR

- 10 a Explain about failure with loss of non-volatile storage. 6M
b What are the methods that are used in log based recovery? 6M

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